

ABSTRACT

A class of codes and associated methods and devices are provided. Advantageously, such codes when used as constituent codes in composite codes intended for iterative decoding, as compared to the standard practice of using convolutional codes, may allow better error-correcting performance to be achieved, especially at low error rates and high code rates, for a given decoder complexity. State sequencing in these codes is driven not by source data alone, as is the case with convolutional codes, but rather by a sequence that includes both the source data and so-called "inserted" data elements, the inserted data elements having a linear dependence on the state sequencing state. In decoding, state transition intervals involving one or more inserted data elements are handled in a special way.